

CLAIMS:

1. A modular explosives cartridge, said cartridge comprising:-
a tubular body having lockable coupling members secured on
opposite ends thereof, said lockable coupling members each including a
5 sealing membrane, in use, to form a sealed closure at opposite ends of said
body to an explosive composition contained within said tubular body, said
lockable coupling members, in use, being adapted to engage with a lockable
coupling member of an adjacent explosives cartridge whereby adjacent
sealing membranes of respective coupling members are pierced to form a
10 continuous column of explosive composition extending between opposite
ends of the coupled explosives cartridges.
2. An explosives cartridge as claimed in claim 1 wherein said
coupling members comprise socket and spigot members secured on
opposite ends of said tubular body.
- 15 3. An explosives cartridge as claimed in claim 2 wherein said
socket and spigot members are adapted for releasable engagement with a
respective socket or spigot member of an adjacent cartridge.
4. An explosives cartridge as claimed in claim 3 wherein said
socket and spigot members together form a bayonet coupling.
- 20 5. An explosives cartridge as claimed in claim 3 wherein said
socket and spigot members each include at least one piercing member
adapted to pierce a sealing membrane associated with an adjacent
explosives cartridge during coupling of adjacent cartridges.
6. An explosives cartridge as claimed in claim 5 wherein said at
25 least one piercing member comprises an axially extending blade.

7. An explosives cartridge as claimed in claim 5 wherein said socket and spigot members each include a pair of diametrically opposed blades.

8. An explosives cartridge as claimed in claim 5 wherein said at
5 least one piercing member has a sharpened edge to cut said sealing member of a respective adjacent cartridge during coupling of respective socket and spigot members.

9. An explosives cartridge as claimed in claim 5 wherein said at
10 least one piercing member is adapted to tear said membrane during coupling of respective socket and spigot members.

10. An explosives cartridge as claimed in claim 1 wherein said coupling members are secured to said tubular body by fusion or by an adhesive composition.

11. An explosives cartridge as claimed in claim 1 wherein said
15 coupling members are secured to said tubular body by mechanical engagement therebetween.

12. An explosives cartridge as claimed in claim 11 wherein said coupling members comprise barbed tubular members frictionally engageable with an interior and/or exterior surface of said tubular body.

20 13. An explosives cartridge as claimed in claim 1 wherein said coupling members are identified by visual identifiers to assist in manufacture of and subsequent coupling of said modular explosives cartridges.

14. An explosives cartridge as claimed in claim 13 wherein said identifiers comprise colour coding of said coupling members.

15. An elongate tubular explosives cartridge comprising a plurality of coupled modular explosives cartridges according to claim 1.

16. A method of assembly of an elongate explosives cartridge, said method comprising the steps of:-

5 coupling together a predetermined number of modular explosives cartridges according to claim 1, said explosives cartridges, in use, being coupled in end to end relationship before being inserted as a unitary member into a borehole.

10 17. A method of charging an explosives borehole with an elongate explosives cartridge comprising a plurality of coupled modular explosives cartridges according to claim 1, said method comprising the steps of inserting portion of a modular explosives cartridge into a borehole, coupling thereto an additional modular explosives cartridge and inserting the assembly further into said borehole and repeating those steps until an
15 elongate explosives cartridge comprising a predetermined number of modular cartridges coupled end to end is located in said borehole.

18. An elongate tubular explosives cartridge according to claim 15 including a spider for locating said elongate tubular explosives cartridge in a borehole, said spider comprising:-

20 a mounting collar, in use securable about an outer surface of an elongate tubular explosives cartridge, said mounting collar supporting a plurality of spaced substantially radially extending fingers, said fingers, in use, being resiliently deformable to accommodate a borehole having a diameter greater than said elongate tubular explosives cartridge and smaller

than a diameter of said radially extending fingers in an undeformed state;
and,

a hollow locator body supported on said mounting collar to
locate, in use, a detonator extending partially via an aperture in a wall of said
5 explosives cartridge to an interior region occupied by an explosives
composition.

19. An elongate tubular explosives cartridge as claimed in claim 18
wherein said mounting collar comprises a retaining band of adjustable length
to accommodate tubular explosives cartridges of varying diameters.

10 20. An elongate tubular explosives cartridge as claimed in claim 18
wherein said mounting collar comprises a circular member adapted, in use,
for frictional engagement on an outer surface of said elongate tubular
explosives cartridge.

21. An elongate tubular explosives cartridge as claimed in claim 18
15 wherein said mounting collar comprises a circular member slidably securable
over an outer surface of said elongate tubular explosives cartridge, said
mounting collar, in use, being anchored to said elongate tubular explosives
cartridge by engagement of said detonator extending into said interior region
of said cartridge.

20 22. An elongate tubular explosives cartridge as claimed in claim 18
wherein said hollow locator body has a tubular axis extending, in use, at an
acute angle with a longitudinal axis of said elongate tubular explosives
cartridge.

23. An elongate tubular explosives cartridge as claimed in claim 22

wherein said hollow locator body, in use, comprises a guide to facilitate alignment of a piercing tool to form an aperture in a wall of said explosives cartridge.

24. An elongate tubular explosives cartridge as claimed in claim 23
- 5 wherein said piercing tool is adapted, in use, to form a detonator locating cavity in said explosives composition.